



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D350-636-024
Job Sheet 187914



Part No: D350-636-024

Job Qty: 1 ea

Part Name: AS350/355 - Skidtubes - Standard w/ Heavy-Duty Wearplates - RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/20/18

Job Tracking No:

Due Date: 1/28/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: D4168-052 REV.C, IIN-D350-636 REV.K IPP REV.A 18.11.29 NEW ISSUE DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	1/28/19	1/28/19	0.00	0.00	Start Up Skidtubes-1		JL
110	Skidtubes	1 pcs	1/28/19	1/28/19	0.00	4.78	Skidtubes-1		JL DAS BE
120	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC10		38 DAS
130	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC5		9-89 38
140	HandFinish	1 pcs	1/28/19	1/28/19	0.00	0.98	HandFinish1		1-1 9-89
150	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC7-2		
160	Skidtubes	1 pcs	1/28/19	1/28/19	0.00	4.78	Skidtubes-1		
170	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC10		
180	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC5		
190	HandFinish	1 pcs	1/28/19	1/28/19	0.00	0.98	HandFinish2		
200	SprayPaint	1 pcs	1/28/19	1/28/19	0.00	0.61	Spray Paint		
205	Outsource	1 pcs	1/28/19	1/28/19			ATE003-VC	5	
210	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC14		
230	HandFinish	1 pcs	1/28/19	1/28/19	0.00	0.98	HandFinish4		
240	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC5		
250	Packaging	1 pcs	1/28/19	1/28/19	0.00	0.00	Packaging1-3		
260	QC	1 pcs	1/28/19	1/28/19	0.00	0.00	QC4		
270	Packaging	1 pcs	1/28/19	1/28/19	0.00	0.00	Packaging3-1		
275	DC	1 pcs	1/28/19	1/28/19	0.00	0.00	DC		
280	QC21-FG	1 Ea	1/28/19	1/28/19	0.00	0.00	QC21		

Part Op 110 - 1- Pick D2600-3 Bent 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg
Descriptions: D4168-6 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. ***ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*** Drill pilot holes as per Dwg D4168 (D4168-6 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting, section DK-DK and open to 0.500" 5- Drill tow ring hole using DT9616 detail "DF" 6- Drill most FWD wearplate hole using DT9678 locating of 66.54" hole 7- Open up holes of Detail DF to 0.297" (total of 2 holes per side) +.201" (total of one hole per side DT9616) as per dwg D4168. 8- Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch:

m38989

9- Grind welds flush as per Dwg D4168

160 - 1-Open up holes using hole saw of Detail DG and ground handling to 0.625" (total of 8 holes per side) as per dwg D4168. 4-Chamfer holes of Detail DG, ground handling and float holes per dwg D4168 (welding instructions on sheet) 5-Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: exp. date: ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D2743 as per dwg D4168 & QSI004 (welding

Traveller change Request staple to back.

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐					
Date : _____		Sequence # : _____		QTY Affected : _____		MRB (QSI042) _____	
DART AEROSPACE Container No: S140424 Part: D350-636-024 Job No: 187914 Serial No/Batch: S140424 Revision: C/K Inspector: _____ Exp Date: _____ Instructions: _____ Date: 12/27/18				Disposition 		Completed By _____ Lead hand / Supervisor _____ QC / QA Coordinator _____	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ Measure/Plan/Do/Check/Act ☐ Drawing ☐ Quality ☐ Design ☐ Drawn/Drawn/Drawn/Drawn ☐				ULT CATEGORY ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Instructions _____							
Marks/Chatter ☐ Drill Holes ☐ Mislabeled ☐ Fit/Function ☐							
Other/Details: _____							

instructions on sheet) A/R Aluminum Rod batch: _____ 10-Grind welds flush as per Dwg D4168 11-Spot face ground handling holes section ES-ES (total of 4 places per side) as per dwg D4168 12- C'bore section ET-ET. ADJUST TOOLING AS REQUIRED. VERF BY: _____ 13- Deburr holes, ensure tube is free of all scratches before sending to paint. ***** FOR DELUXE SKIDTUBE IF APPLICABLE DRILL TOW RING HOLE IN TUBE *****

*****REF TO W/O BATCH: _____

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: _____ 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: _____

210 - Inspect for foreign object per QSI 024

230 - 1- Install inserts as per Dwg D4168 2-Inspect for Foreign Objects 3-Install blade fitting D3488-4, wearshoes and ground handling hardware as per dwg D4168 SIKA FLEX 241 BATCH: _____ EXP DATE: _____

5-Coat all exposed fasteners with "LPS Procyon" batch: _____

250 - If making a D350-636-216 pick kit will only requires: 1 X AN3C37A 1 X AN3C34A 1 X AN3C42A

260 - *****ensure antiseize is on AN8C21A bolts*****

270 - Identify and pack for shipping as per PPPD350-636-024 Location : FG071

275 - record fwd angle: 89.7 Photocopy blue file and type labels per PPP D350-636-024 CHG 001

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 pcs (1 ea)	90-Start up Operation	5129399 5060499
D2744	Cap	1 pcs (1 ea)	90-Start up Operation	
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	
D2743	Crossbolt Spacer	8 pcs (8 ea)	160-Skidtubes	
ALS4-1032-225	Rivnut	4 Ea (4 ea)	230-HandFinish	
AN3C34A	Bolt	1 Ea (1 ea)	230-HandFinish	
AN3C36A	Bolt	4 Ea (4 ea)	230-HandFinish	
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	
D3488-4	Blade Fitting, RH	1 Ea (1 ea)	230-HandFinish	
D3631-1	Washer	8 pcs (8 ea)	230-HandFinish	
D3873-1	Bushing	7 Ea (7 ea)	230-HandFinish	
D4154-041	Wearplate Assembly	1 Ea (1 ea)	230-HandFinish	
D4170-1	Bushing	4 Ea (4 ea)	230-HandFinish	
D4171-1	Bushing	1 pcs (1 ea)	230-HandFinish	
MS21043-3	Nut	5 Ea (5 ea)	230-HandFinish	
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	
NAS1149C0332R	Washer	4 Ea (4 ea)	230-HandFinish	
NAS1149C0363R	Washer	9 Ea (9 ea)	230-HandFinish	
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	
AN3C37A	Bolt	1 Ea (1 ea)	250-Packaging	
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	10	0
	D2744	1	10	0
160-Skidtubes	D2739	1	0	0
	D2743	8	48	0
230-HandFinish	ALS4-1032-225	4	1,171	0
	AN3C34A	1	26	0
	AN3C36A	4	444	0
	AN3C6A	4	132	0
	AN6C44A	4	76	0
	AN8C35A	1	27	0
	D2745	8	226	0
	D3488-4	1	7	0
	D3631-1	8	425	0
	D3873-1	7	141	0

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐	DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☒</td> <td>Cross tube ☐</td> <td>Eng. (Non-AW) ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Water Jet ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Supplier Quality ☐</td> </tr> </table>				Skid-tube ☒	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐	Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																										
Skid-tube ☒	Cross tube ☐	Eng. (Non-AW) ☐	Engineering ☐																																								
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Water Jet ☐																																								
Large Fab ☐	Finishing ☐	Rec/Store/Packaging ☐	Supplier Quality ☐																																								
Date : <u>19-01-08</u>		Sequence #: <u>160</u>		QTY Affected : <u>1</u>		MRB (QSI042) DAS 9 9-89 <u>19-01-08</u>																																					
Description Work Order Deviation				Disposition																																							
<u>Operator open hole at .750</u> <u>must be at .625</u>				<u>Scrap / destroy</u> <u>no replace</u>																																							
				Completed By DAS 9 9-89 <u>19-01-08</u>																																							
				Lead hand / Supervisor DAS 9 9-89 <u>19-01-08</u>																																							
				QC / QA Coordinator DAS 9 9-89 <u>19-01-08</u>																																							
Root Cause <table style="width:100%;"> <tr><td>Operator ☒</td></tr> <tr><td>Manufacturing Process ☐</td></tr> <tr><td>Equip/Tooling ☐</td></tr> <tr><td>Handling/Presservation ☐</td></tr> <tr><td>Material ☐</td></tr> <tr><td>Product Improvement ☐</td></tr> <tr><td>Process Improvement ☐</td></tr> <tr><td>Human Factors ☐</td></tr> </table>		Operator ☒	Manufacturing Process ☐	Equip/Tooling ☐	Handling/Presservation ☐	Material ☐	Product Improvement ☐	Process Improvement ☐	Human Factors ☐	FAULT CATEGORY <table style="width:100%;"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☐ Misaligned/off center</td> <td>☐ Folio/Program</td> <td>☐ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☒ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>						☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☒ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
Operator ☒																																											
Manufacturing Process ☐																																											
Equip/Tooling ☐																																											
Handling/Presservation ☐																																											
Material ☐																																											
Product Improvement ☐																																											
Process Improvement ☐																																											
Human Factors ☐																																											
☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong																																								
☐ Bending	☐ Misaligned/off center	☐ Folio/Program	☐ Outside Tolerance																																								
☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing																																								
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish																																								
☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																								
☐ Marks/Chatter	☒ Drill Holes	☐ Out of Sequence	☐ Misread																																								
☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up																																									
		Other/Details:																																									

250-Packaging

D4154-041	1	0	0
D4170-1	4	52	0
D4171-1	1	8	0
MS21043-3	5	796	0
MS21043-6	4	89	0
MS21083C8	1	98	0
NAS1149C0332R	4	2,333	0
NAS1149C0363R	9	867	0
NAS1149C0832R	1	370	0
NAS1515H3L	4	462	0
AN3C37A	1	59	0
AN8C21A	2	57	0
D2741	1	70	0
MS21083C8	2	98	0
NAS1149D0863J	2	160	0

Part Specifications

Specifications could not be found.

Plex 12/20/18 11:09 AM Dart.lajeunesse.marie

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐		FAULT CATEGORY Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐			
Other/Details:					

QTY -041	QTY -042	QTY -043	QTY -044	QTY -051	QTY -052	P/N	DESCRIPTION
X						D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X					D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X				D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X			D4168-044	350 SKIDTUBE ASSEMBLY, RH
				X		D4168-051	350 SKIDTUBE ASSEMBLY, LH
					X	D4168-052	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	1	1	D2739	WEB
8	8	8	8	8	8	D2743	CROSS BOLT SPACER
1	1	1	1	1	1	D2744	CAP
8	8	8	8	8	8	D2745	BUSHING
1		1		1		D3488-3	BLADE FITTING, LH
	1		1		1	D3488-4	BLADE FITTING, RH
4	4	4	4			D3490-1	CROSS BOLT SPACER
4	4					D3490-3	CROSS BOLT SPACER
		4	4			D3490-5	CROSS BOLT SPACER
8	8	8	8			D3492-041	PLUG ASSEMBLY
8	8					D3492-043	PLUG ASSEMBLY
		8	8			D3492-045	PLUG ASSEMBLY
8	8	8	8	8	8	D3631-1	WASHER
7	7	7	7	7	7	D3873-1	BUSHING
1	1	1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1						D4168-1	SKIDTUBE WELDMENT, LH
	1					D4168-2	SKIDTUBE WELDMENT, RH
		1				D4168-3	SKIDTUBE WELDMENT, LH
			1			D4168-4	SKIDTUBE WELDMENT, RH
				1		D4168-5	SKIDTUBE WELDMENT, LH
					1	D4168-6	SKIDTUBE WELDMENT, RH
4	4	4	4	4	4	D4170-1	SPACER
1	1	1	1	1	1	D4171-1	BUSHING
4	4	4	4	4	4	ALS4-1032-225	INSERT
1	1	1	1	1	1	AN3C34A	BOLT
4	4	4	4	4	4	AN3C36A	BOLT
4	4	4	4	4	4	AN3C6A	BOLT
4	4	4	4	4	4	AN6C44A	BOLT
1	1	1	1	1	1	AN8C35A	BOLT
5	5	5	5	5	5	MS21043-3	NUT
4	4	4	4	4	4	MS21043-6	NUT
1	1	1	1	1	1	MS21083C8	NUT
4	4	4	4	4	4	NAS1149C0332R	WASHER
9	9	9	9	9	9	NAS1149C0363R	WASHER
1	1	1	1	1	1	NAS1149C0832R	WASHER
4	4	4	4	4	4	NAS1515H3L	WASHER

NOTES:

- 1) MATERIAL: MAKE D4168-1/-2/-3/-4/-5/-6 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB. STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.3
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D4168-041/-042/-043/-044 = 32.3 lbs
D4168-051/-052 = 31.9 lbs
- 8) WELD PER DART QSI 004
- 9) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 10) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- 11) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AJ EXCEPT HORIZONTAL
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

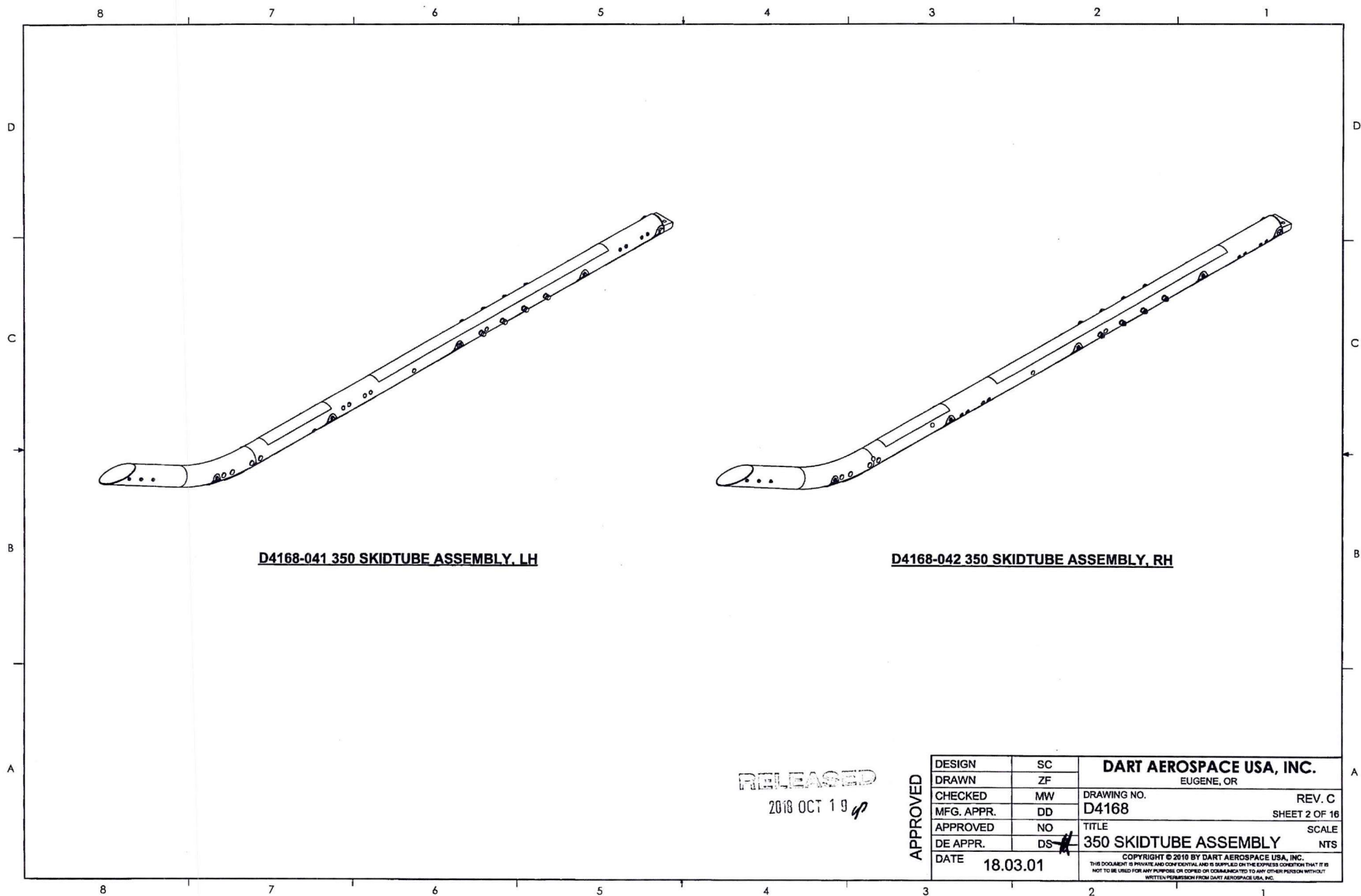
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 187914 *MC*
1812-20

C	ADDED -051/-052 (ZN D5-1 SHEETS 4, 15-16); ADDED D4168-5/-6 (ZN B5-1, SHEETS 9, 10); D3488-3/-4 REPLACES D3488-041/-042 (ZN C5-1, D2-11, D2-12, D2-13, D2-14); ADDED NOTES 13, 14 (ZN C4-1); NAS1149C0363R WAS AN960C10 (ZN A5-1, C6-11, C7-11, D8-11, C6-12, C7-12, D8-12, C6-13, C7-13, D8-13, C6-14, C7-14, D8-14); NAS1149C0332R WAS AN960C10L (ZN B1-11, B1-12, B1-13, B1-14); NAS1149C0832R WAS AN960C816L (ZN C1-11, C1-12, C1-13, C1-14)	ZF	18.03.01
B	ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1/-4/-5/-6/-7); UPDATED FINISH OPTIONS. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
A	NEW ISSUE	SC	10.08.09
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 1 OF 18
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED

2018 OCT 19
ECP 18-030

APPROVED



D4168-041 350 SKIDTUBE ASSEMBLY, LH

D4168-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2018 OCT 19 *qp*

APPROVED

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 2 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

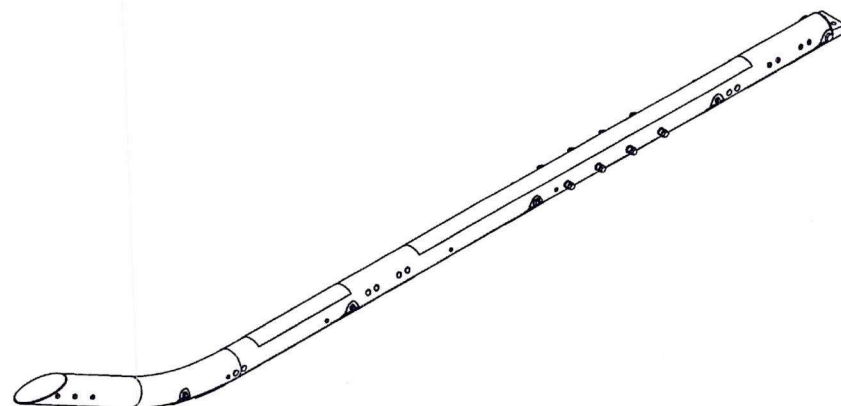
8 7 6 5 4 3 2 1

D

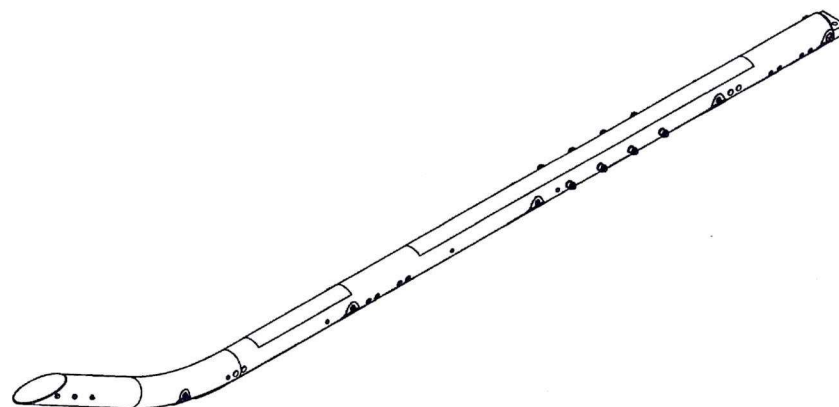
C

B

A



D4168-043 350 SKIDTUBE ASSEMBLY, LH



D4168-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2018 OCT 19 *up*

APPROVED

DESIGN	SC	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 3 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS-4	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

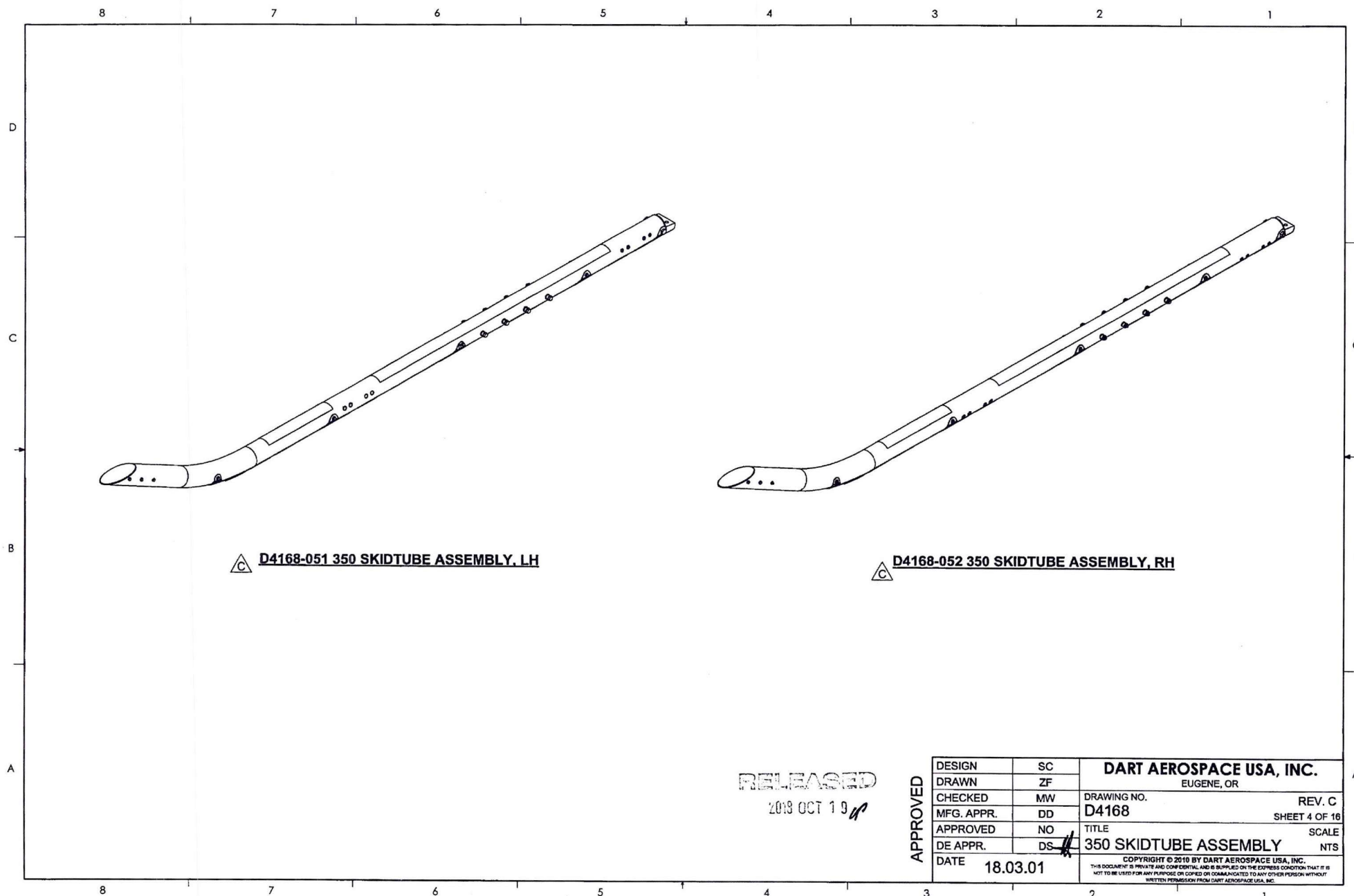
8 7 6 5 4 3 2 1

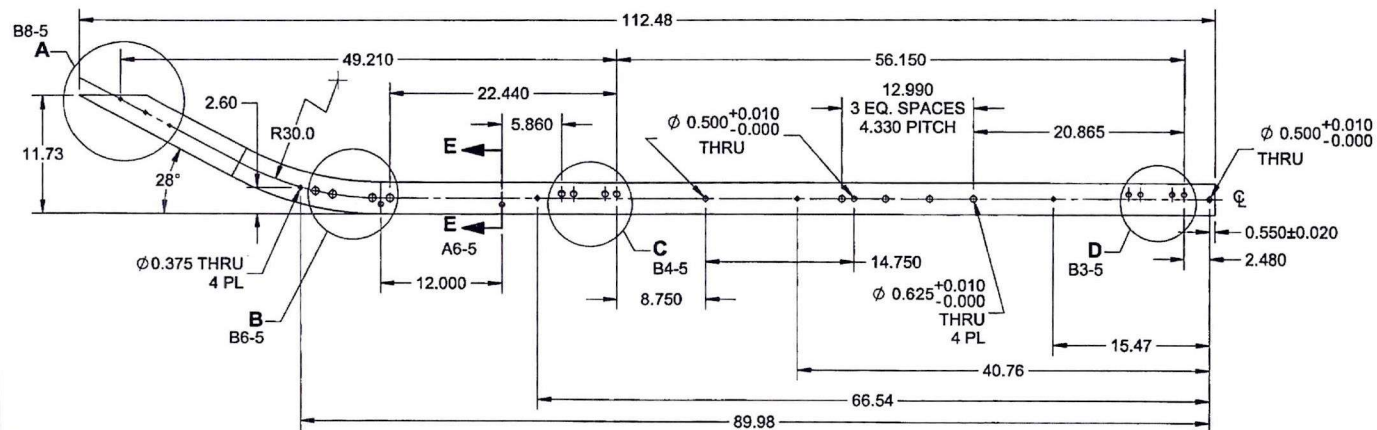
D

C

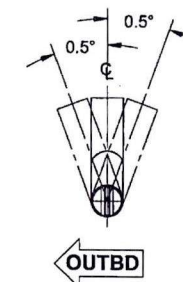
B

A

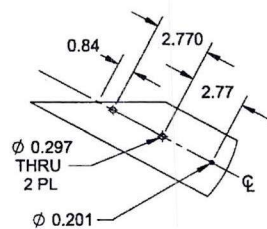




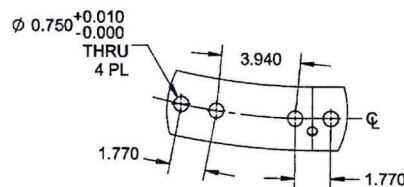
D4168-1 LH SKIDTUBE



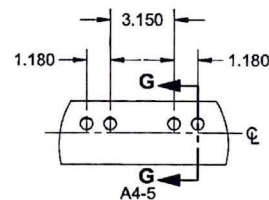
MAX ALLOWABLE
TWIST ON FWD BEND
(VIEW LOOKING FWD)



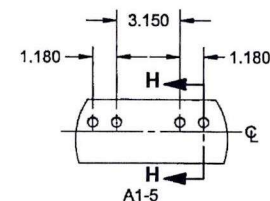
DETAIL A
SCALE 2X



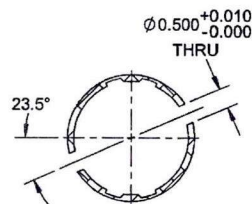
DETAIL B
SCALE 2X



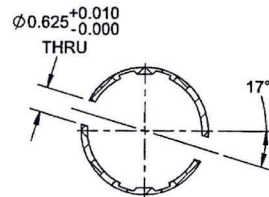
DETAIL C
SCALE 2X



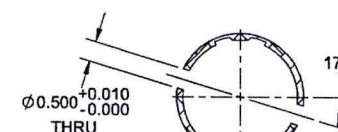
DETAIL D
SCALE 2X



SECTION E-E
SCALE 4X, 2 PL



SECTION G-G
SCALE 4X, 4 PL



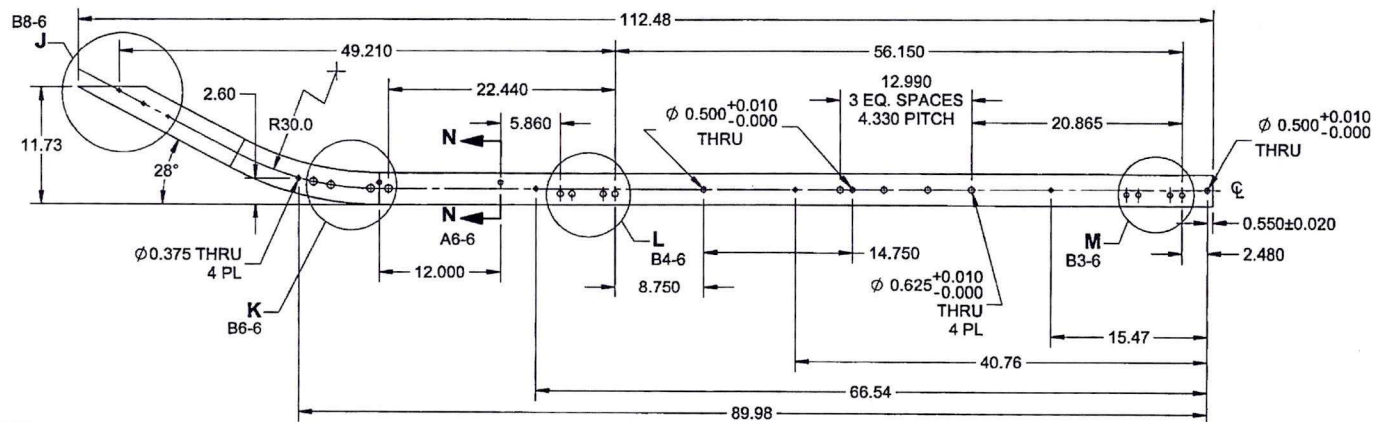
SECTION H-H
SCALE 4X, 4 PL

RELEASED

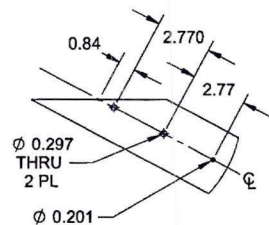
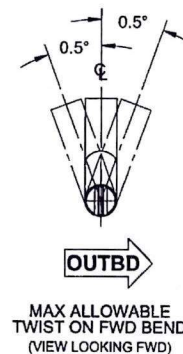
2010 OCT 19

APPROVED

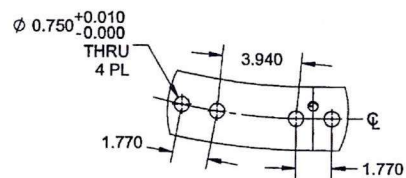
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 5 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



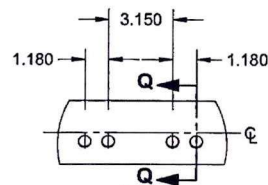
D4168-2 RH SKIDTUBE



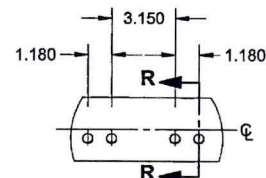
DETAIL J
SCALE 2X



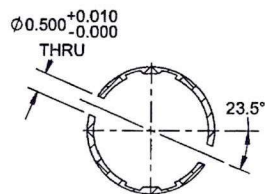
DETAIL K
SCALE 2X



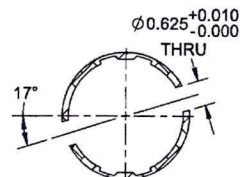
DETAIL L
SCALE 2X



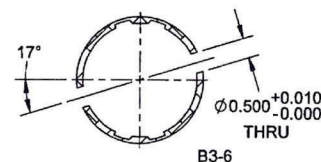
DETAIL M
SCALE 2X



SECTION N-N
SCALE 4X, 2 PL



SECTION Q-Q
SCALE 4X, 4 PL



SECTION R-R
SCALE 4X, 4 PL

APPROVED

DESIGN	SC
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.03.01

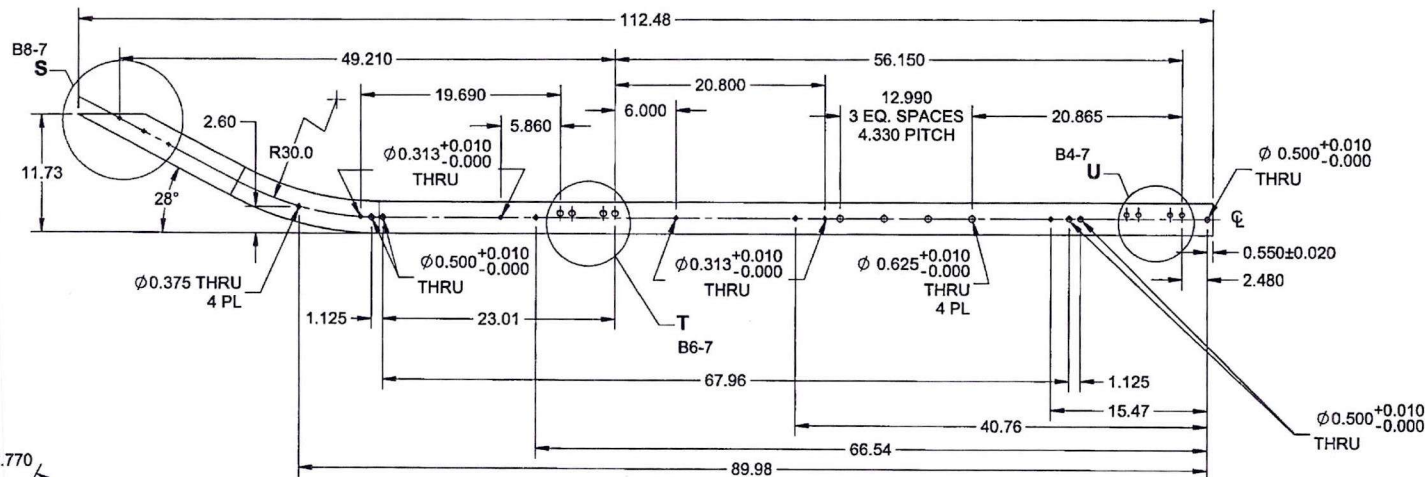
DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO. **D4168** REV. C
SHEET 6 OF 16
TITLE **350 SKIDTUBE ASSEMBLY** SCALE NTS

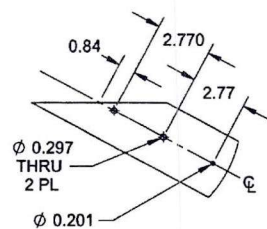
COPYRIGHT © 2010 BY DART AEROSPACE USA, INC.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

RELEASED

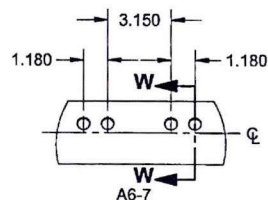
2010 OCT 19



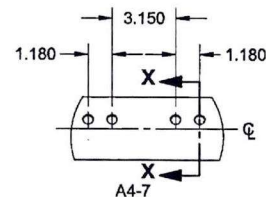
D4168-3 LH SKIDTUBE



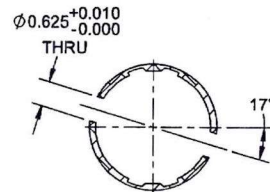
DETAIL S
SCALE 2X



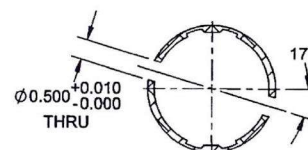
DETAIL T
SCALE 2X



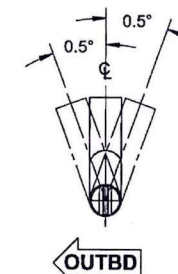
DETAIL U
SCALE 2X



SECTION W-W
SCALE 4X, 4 PL



SECTION X-X
SCALE 4X, 4 PL



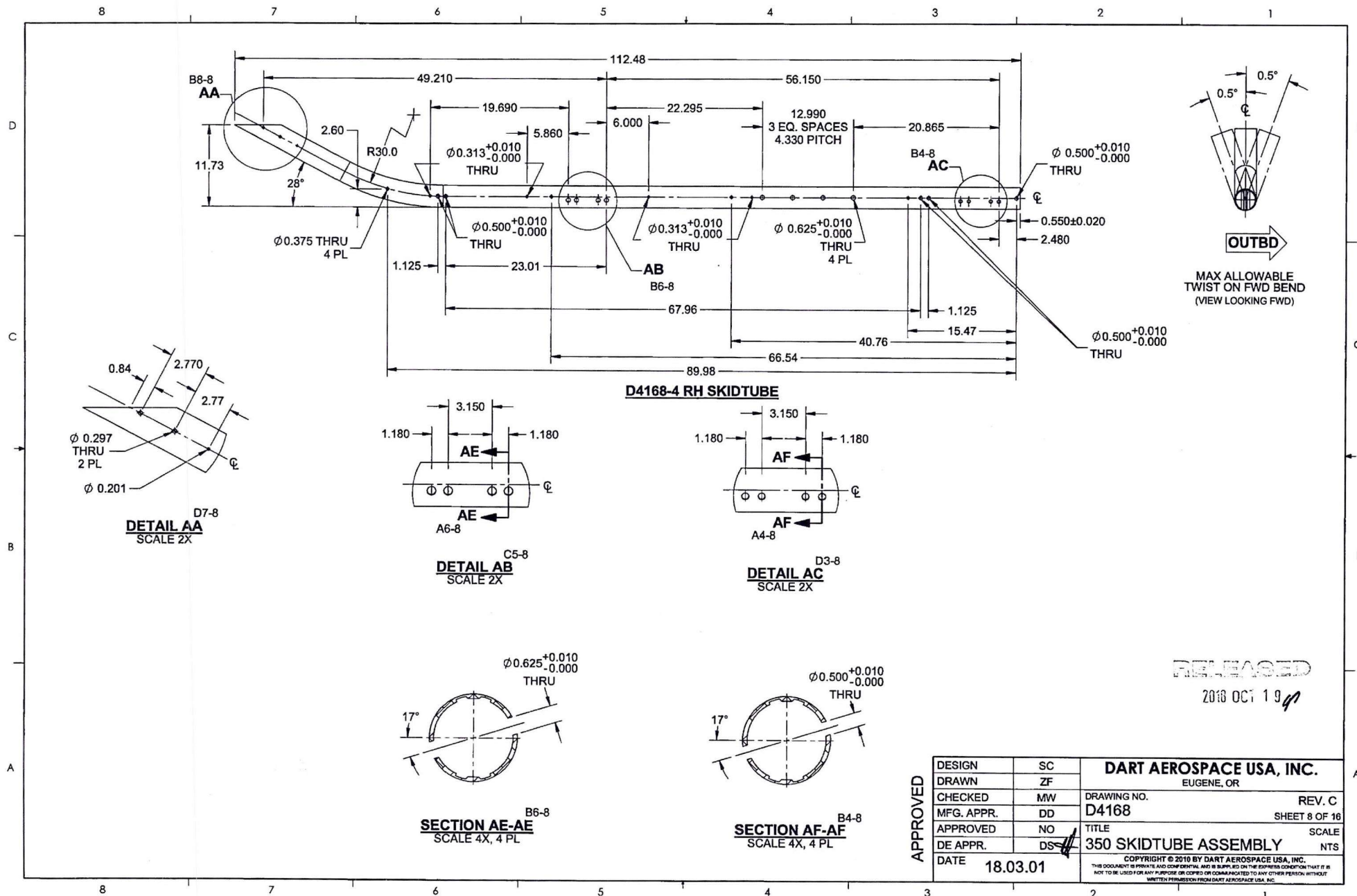
MAX ALLOWABLE
TWIST ON FWD BEND
(VIEW LOOKING FWD)

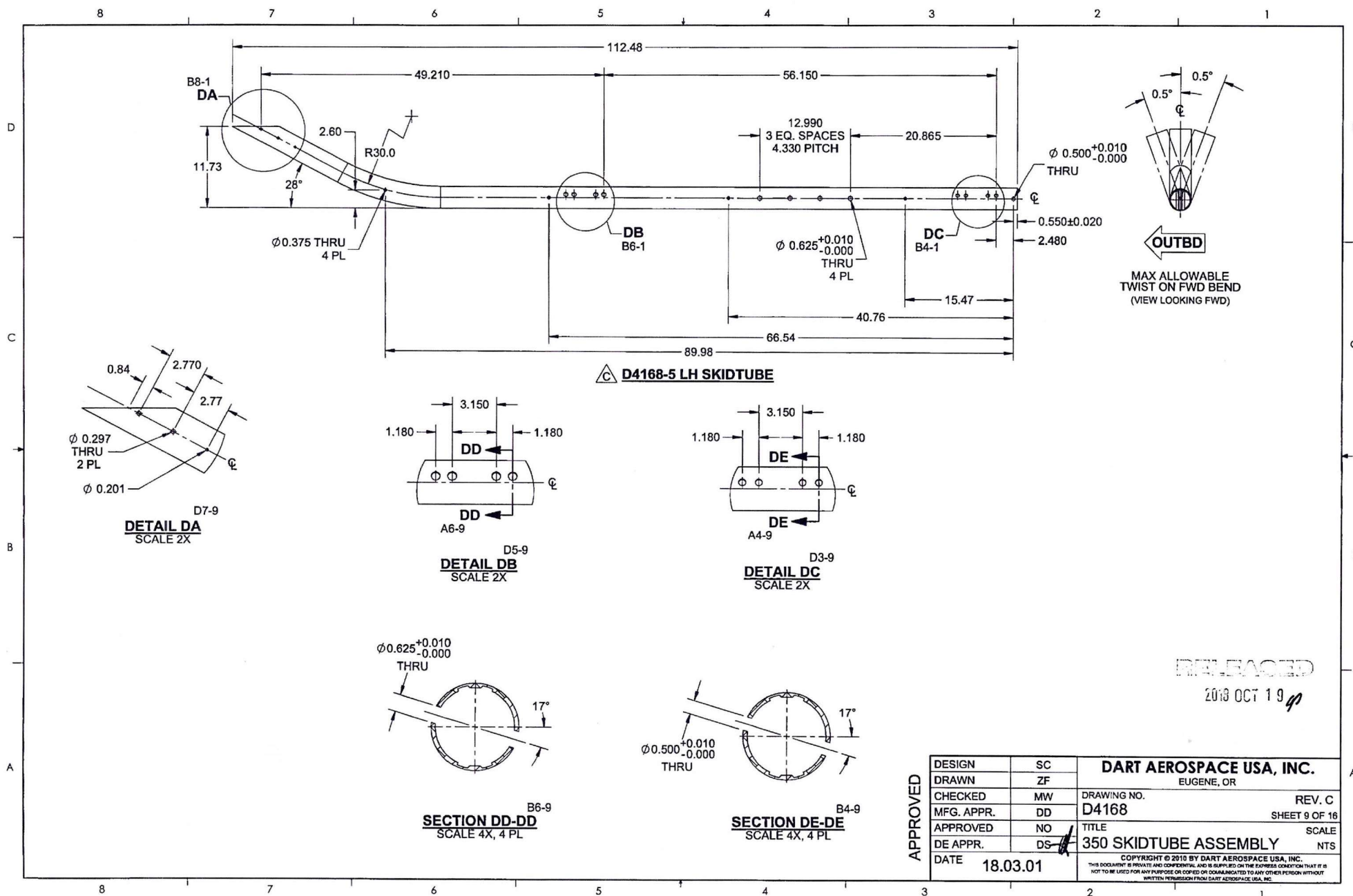
RELEASED

2010 OCT 19

APPROVED

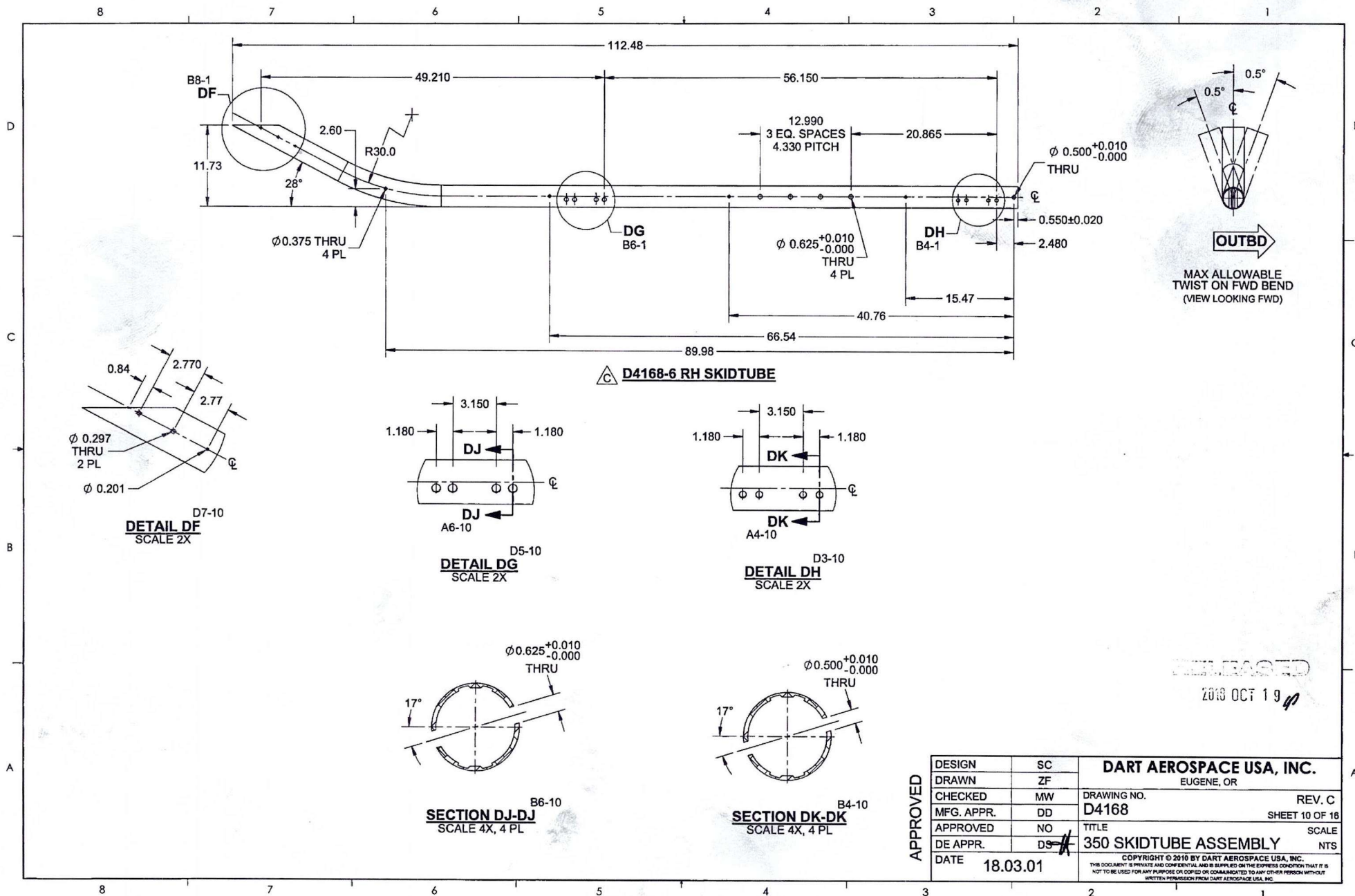
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 7 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

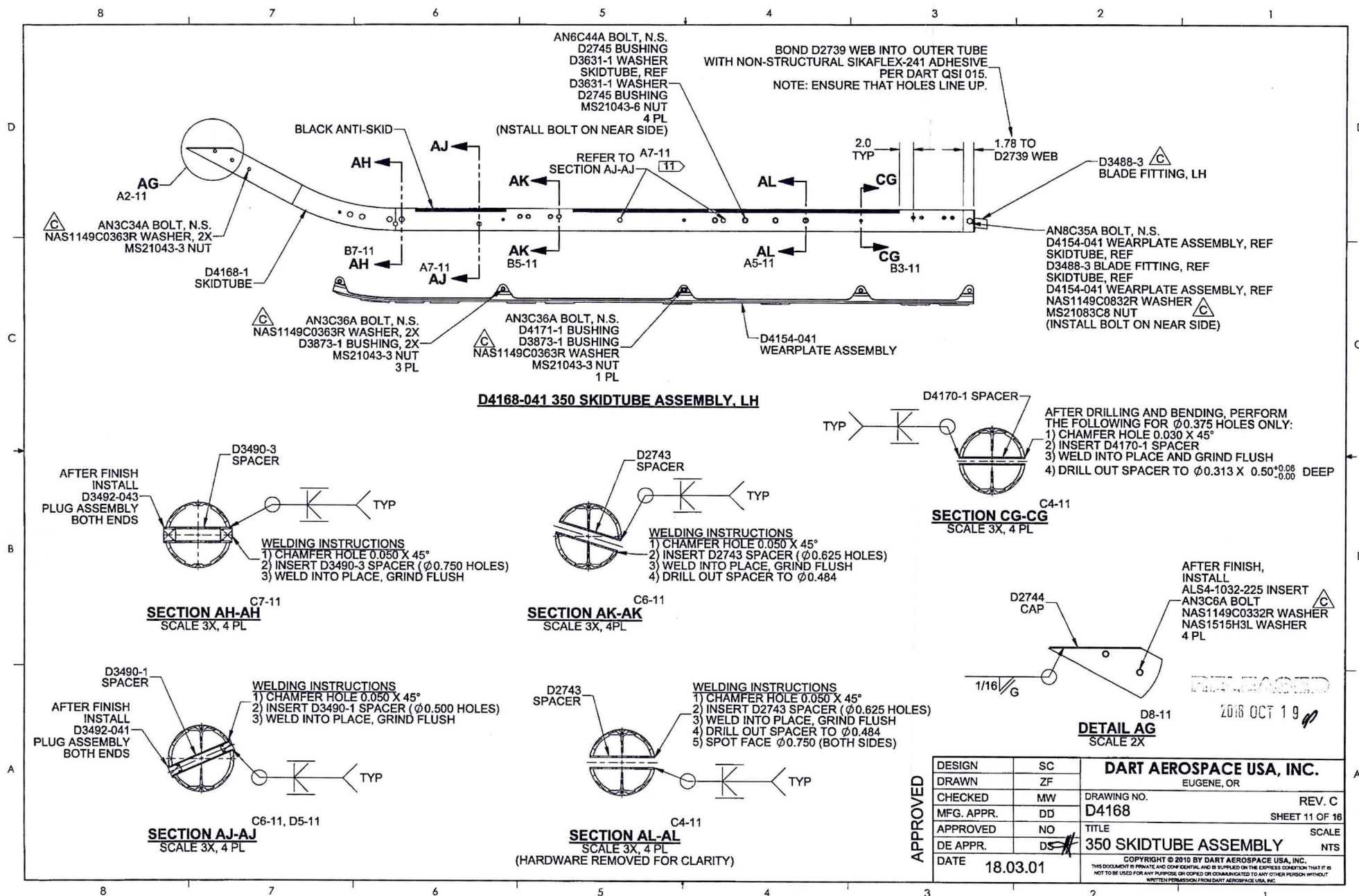


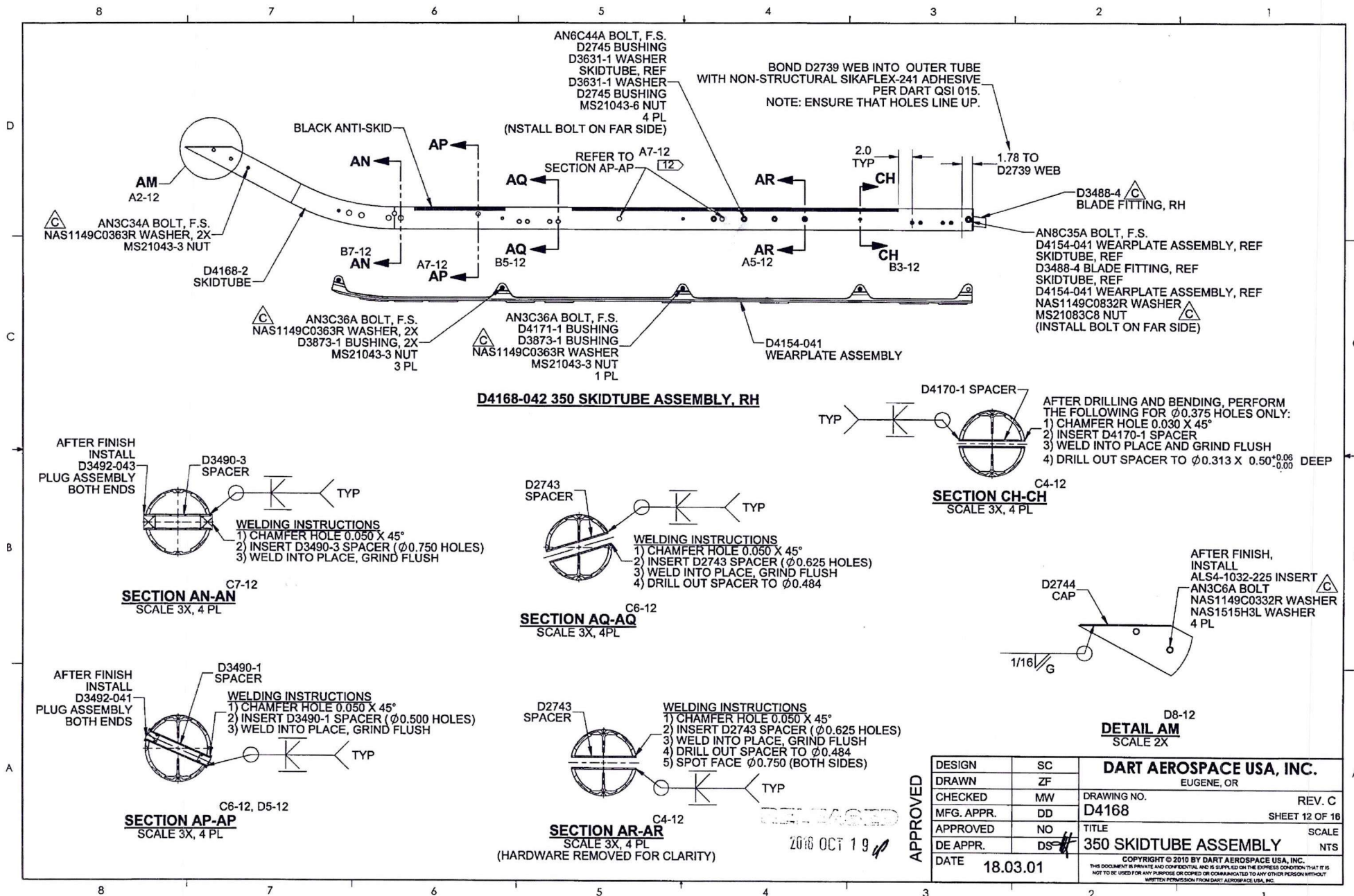


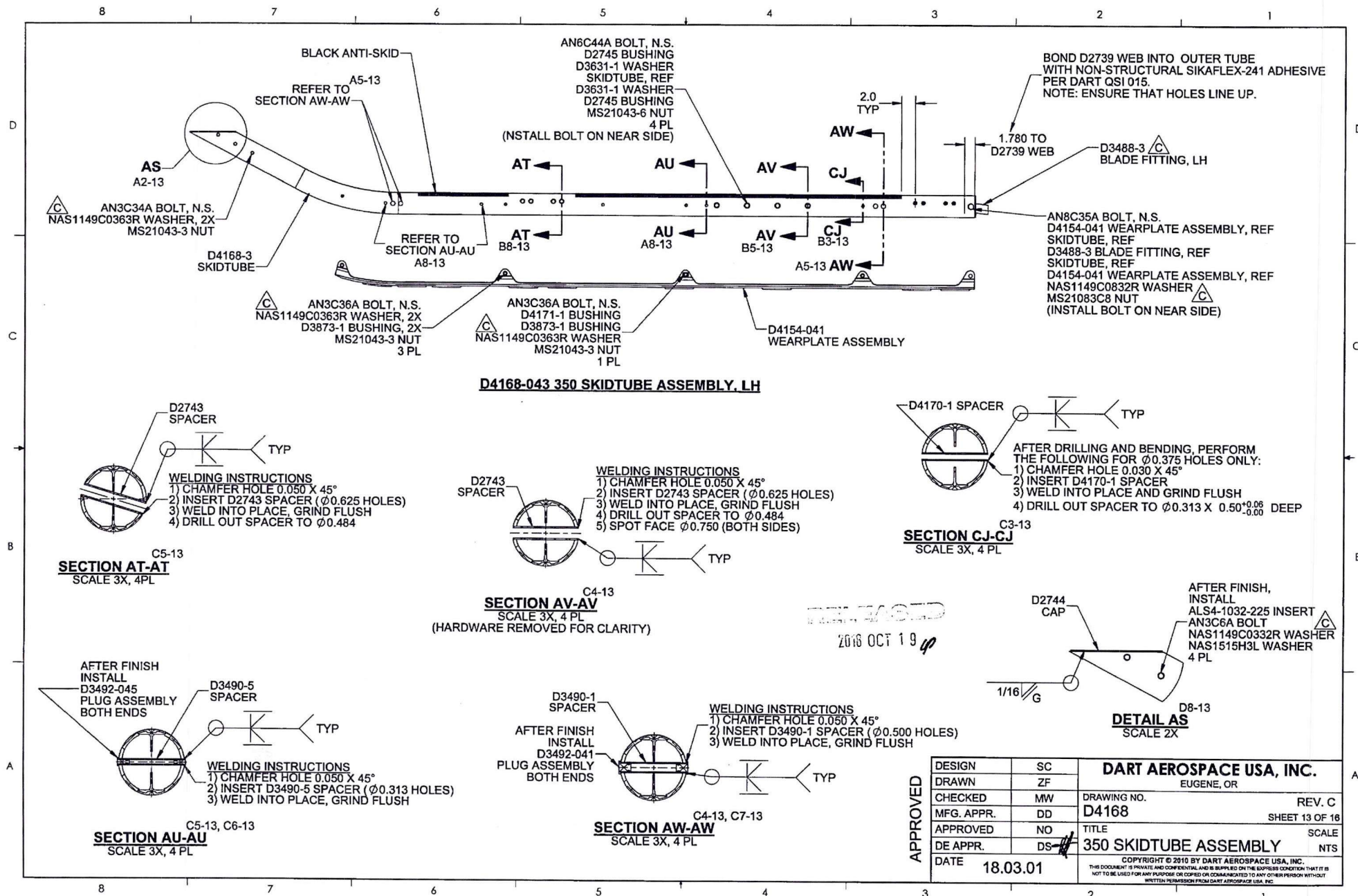
APPROVED

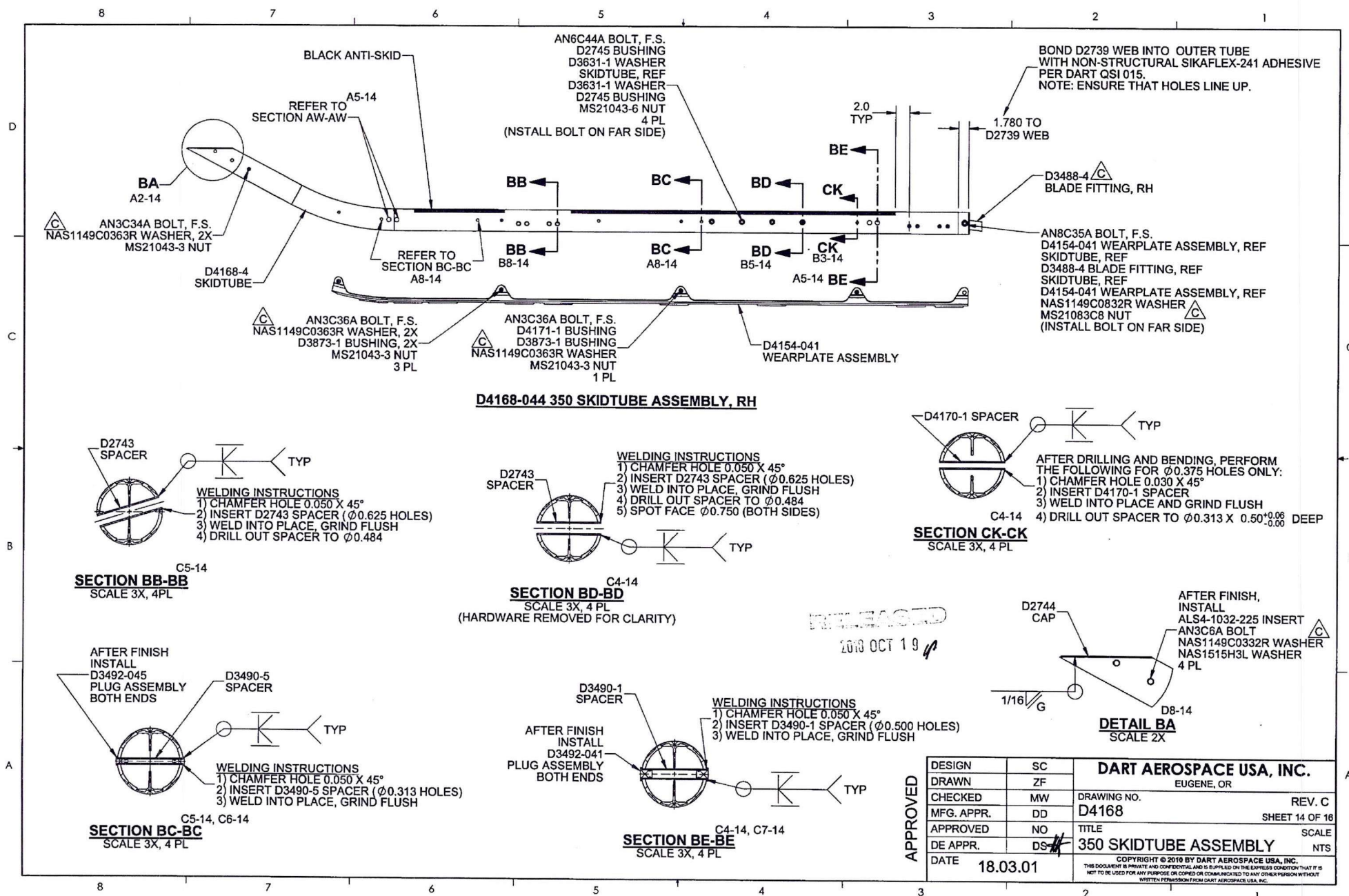
DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 9 OF 18
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

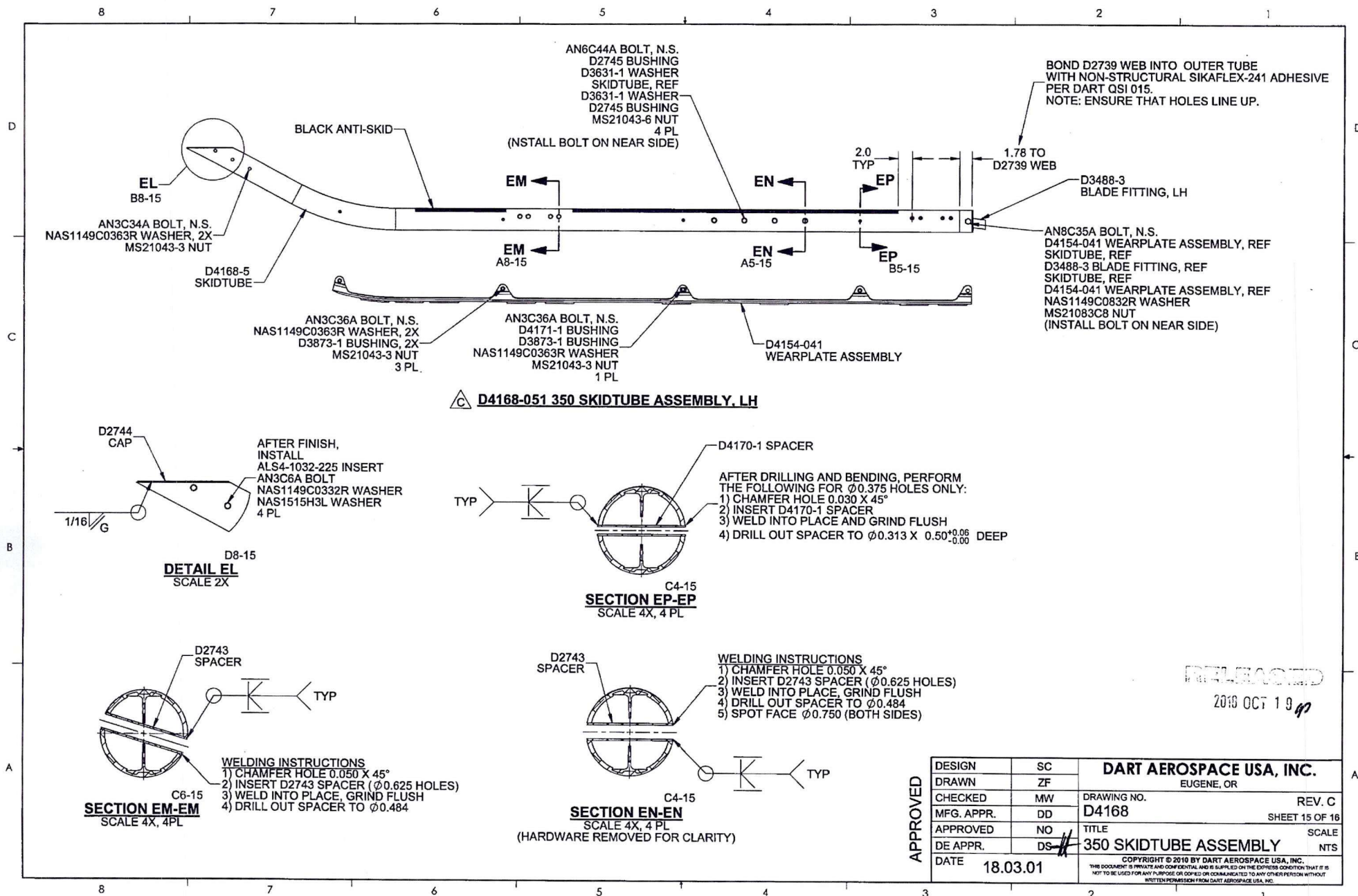


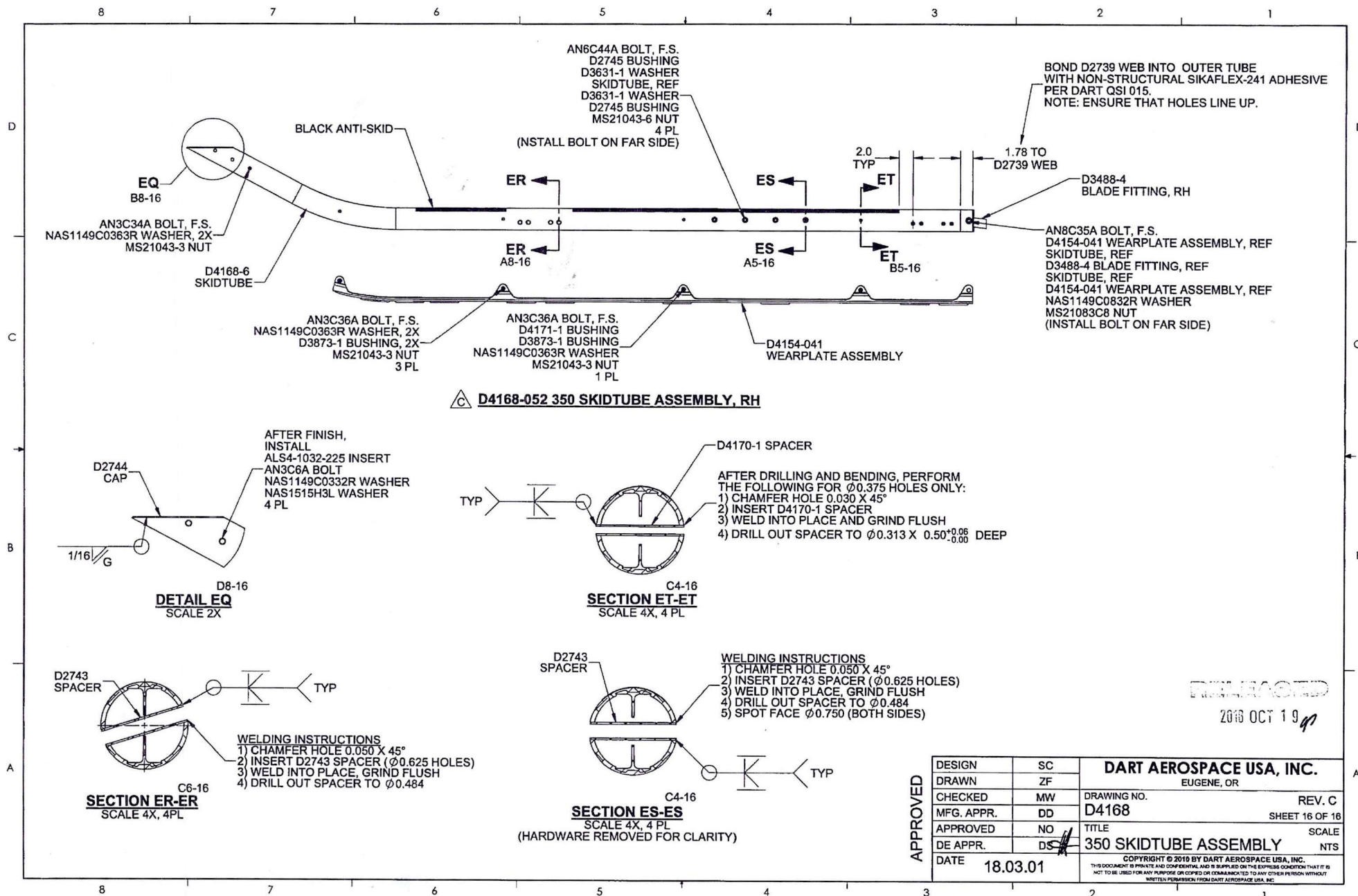












SPECIFICATION CONTROL DRAWING

D2600-X-XXX EXTRUSION

NOTES:

1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 40 KSI
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N PER DART QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
- 7) WEIGHT: D2600-1 = 0.078 lb/in, D2600-3 = 0.130 lb/in, D2600-5 = 0.045 lb/in, D2600-7 = 0.091 lb/in
- 8) NO TOOLING MARKS
- 9) FOR D2600-1, PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH (EX. D2600-1-160 IS 160" LONG).
D2600-1 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18870
- SIGNATURE ALUMINUM (BON-L) DIE # 897121
- 10) FOR D2600-3, PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH (EX. D2600-3-120 IS 120" LONG).
D2600-3 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MH-18859
- SIGNATURE ALUMINUM (BON-L) DIE # 897122
- 11) FOR D2600-5, PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH (EX. D2600-5-108 IS 108" LONG).
D2600-5 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18871
- 12) FOR D2600-7, PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH (EX. D2600-7-125 IS 125" LONG).
D2600-7 EXTRUSION MANUFACTURED FROM:
- CARADON INDALEX DIE # MS-18872

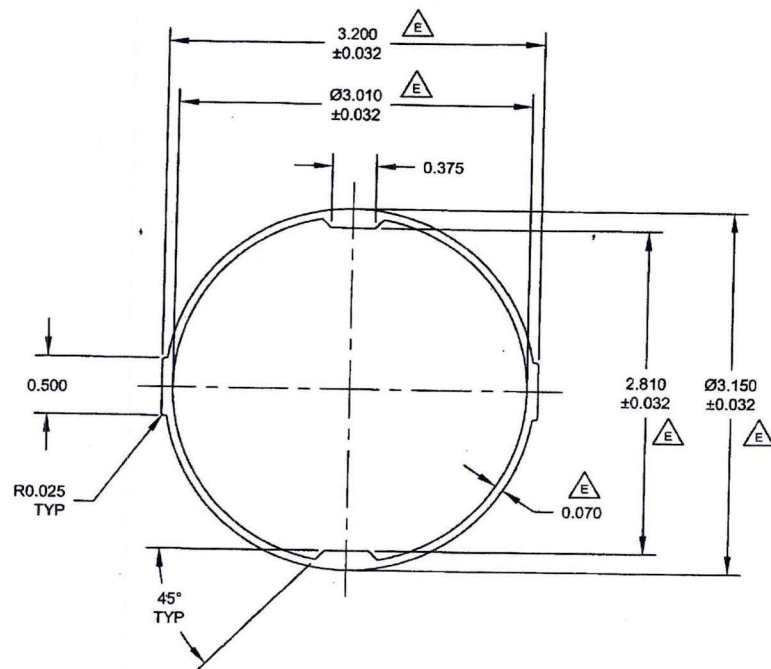
RELEASED
R 2012-01-11

E	REFORMAT DWG; ALL DIMS & TOL. UPDATE TO MATCH MFG DIE DWGS; ADD ASTM B221 SPEC (D8-1)	CP	11.10.18
D	INCREASE MIN. UTS TO 40 KSI	DS	98.08.20
C	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	DS	98.04.16
B	CHANGE MATERIAL SPEC.	DS	97.09.09
A	NEW ISSUE	DS	97.01.21
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	11.10.18		

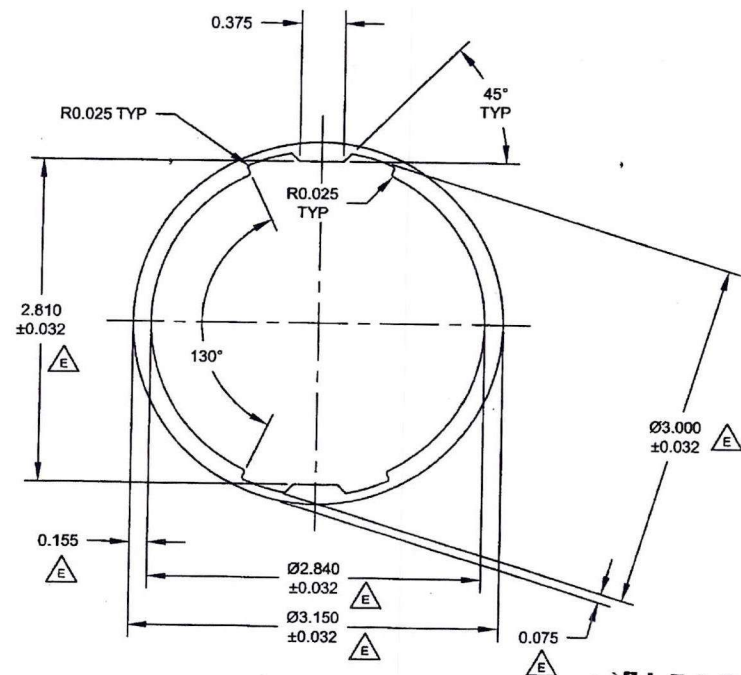
DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D2600
REV. E
SHEET 1 OF 3
TITLE
EXTRUSION
SCALE
NTS

COPYRIGHT © 1997 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD



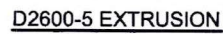
D2600-1 EXTRUSION



D2600-3 EXTRUSION

RELEASED
2012-01-11

DESIGN	1	DART AEROSPACE LTD	
DRAWN	AS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. E
MFG. APPR.	E	D2600	SHEET 2 OF 3
APPROVED	W	TITLE	SCALE
DE APPR.	W	EXTRUSION	NTS
DATE	11.10.18	COPYRIGHT © 1987 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



DECLASSIFIED
2012-01-11

DESIGN	<i>4</i>	DART AEROSPACE LTD	
DRAWN	<i>Q</i>	HAWKESSBURY, ONTARIO, CANADA	
CHECKED	<i>ASS</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>EL</i>	D2600	SHEET 3 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	EXTRUSION	NTS
DATE	11.10.18	COPYRIGHT © 1997 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



Traveller Change Request

Part#: 350-636-024

Job#: 187914

Name Jessey Young

Date 12/21/2018

Workcenter Skitubes

Operation # 110

Issue: Quality ☐

Wrong Routing ☐

Op Description ☒

Missing Information ☐

Material ☐

Other ☐

Change requested: The use of Jig 8863A and 8863B
in step 2 of operation 110 is not required
for specific model of 350. May
cause confusion.

Name _____

Date _____

Workcenter | _____

Operation # _____

Issue: Quality ☐

Wrong Routing ☐

Op Description ☐

Missing Information ☐

Material ☐

Other ☐

Name _____

Date _____

Workcenter _____

Operation # _____

Issue: Quality ☐

Wrong Routing ☐

Op Description ☐

Missing Information ☐

Material ☐

Other ☐

Change requested: _____